TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 23, 1907.

The President, Dr. George Woolsey, in the Chair.

MALIGNANT DISEASE OF THE STOMACH.

Dr. Joseph A. Blake presented a series of three cases as follows:

Case I.—A man sixty-five years old, who had been operated on ten months before for carcinoma of the pylorus. For three or four years prior to the operation he had had dyspeptic symptoms, consisting chiefly in sour stomach and eructations of gas. In the year previous to operation he had occasional attacks of vomiting, gradually becoming more frequent, and at times large in amount. He had suffered some pain after eating, accompanied by a sensation of fulness and distention which was relieved by vomiting. In the year preceding operation he had lost about thirty pounds in weight. The patient would not allow the passage of a stomach tube. Examination of the vomitus showed combined acid about 60; at times, no free hydrochloric acid; at other times free hydrochloric, 26. There was no lactic acid and no evidence of prolonged retention.

At the operation, which was done on March 31, 1906, an annular growth, 1½ inches in diameter, was found occupying the site of the pylorus, constricting its lumen for one quarter of an inch. The lymphatics were enlarged along the lesser curvature as far as the cardia. There was a large lymph node alongside the duodenum, close to the pancreas. The growth, with the stomach as far as the cardia, was removed, including the lymph nodes. The ends of the duodenum and the stomach were closed, and a

posterior gastrojejunostomy was done by means of a Murphy button with a short loop.

The patient sat up in bed the second day after the operation. He was able to shave himself three days later, and was out of bed on the eighth day. On account of the Murphy button he was kept on fluid diet until the eleventh day, when the button was passed.

Immediately after the operation, he weighed 108 pounds. Four months later he weighed 148 pounds and his present weight is 144 pounds. He had enjoyed perfectly good health, and was attending to his business. There were no symptoms referable to the stomach, excepting that he found that frequent small meals agreed with him better than meals taken at the usual intervals. Examination of the growth showed it to be adenocarcinoma.

CASE II.—A man, forty-one years old, upon whom Dr. Blake had operated eight months ago at the Roosevelt Hospital for carcinoma of the pylorus. The patient had complained of symptoms for twelve months preceding the operation. The first symptoms were a heavy feeling in the epigastrium, and eructations of gas and sour fluid. For eight months he had had obstructive vomiting. There had been no pain, no hæmatemesis, and no blood in the stools. He had lost thirty pounds during the year.

Upon examination, a mass about the size of an egg was felt in the right hypochondrium. There was a distinct splashing sound, and peristaltic waves were evident. The stomach reached two fingers below the umbilicus. The gastric analysis, after a test meal, showed free hydrochloric acid, 14; combined hydrochloric, 37; total acidity, 72; no lactic acid. Starch and glucose were present; no blood; no bacteria.

At operation, a growth was found at the pylorus about 2 inches long by 1½ inches in diameter, and there were slight lymphatic extensions along the lesser curvature. The mass was movable, and there were no adhesions. The stomach was greatly dilated, extending 2 inches below the umbilicus. The growth, with about 6 inches of the stomach, was excised, the line of excision extending from the cardia to the greater curvature. The end of the duodenum was closed and inverted, and a posterior gastrojejunostomy was done with clamp and suture. Water was given by mouth the day of operation, and the quantity was gradually increased, until the patient was taking 4 ounces every four hours.

The patient vomited once after the operation. On the day after the operation, peptonized milk was given commencing with one drachm, and increased to 2 ounces every two hours. Three days after the operation he was given beef broth, beef juice and egg nog, and on the following day cereals, soft cooked eggs and milk toast. He was kept sitting up in bed as much as possible every day, commencing the day after operation, and was out of bed on the eighth day and allowed to walk on the eleventh day.

The patient's weight, on admission, was 97 pounds. Nine days after the operation he weighed 107 pounds; thirteen days after the operation 112 pounds, and three months after the operation 147 pounds. His present weight is 171 pounds a gain of 74 pounds.

The microscopical examination of the growth showed it to be carcinoma.

CASE III.—A woman, forty-nine years of age, who had been operated upon for hæmorrhages from a gastric ulcer, a gastro-enterostomy having been done. This resulted in a "vicious circle," which was finally cured by division of the pylorus.

The patient gave the following history: Thirty-three years before, when sixteen years of age, she suffered from dyspepsia and heartburn, with sour eructations. Thirteen years before she had had an attack of epigastric pain, and vomited a lot of coffee-ground material, with blood. Four years before she had again vomited blood. Since that time she had noticed that at times her stools had been tarry. For two weeks before her admission to Roosevelt Hospital she had repeatedly vomited large amounts of blood.

Upon admission, her red blood cells were 1,740,000; hæmaglobin, 40 per cent. The test meal showed moderate hyperacidity. There was tenderness and slight muscular rigidity over the epigastrium, and apparently slight dilatation of the stomach; no tumor was felt. While in the hospital, before operation, she had continuous hæmorrhages from the stomach, small in amount.

On September 15, 1906, she was operated on by Dr. L. C. Hotchkiss, who was then on duty, and a posterior gastro-enterostomy was performed by the Peterson method, that is, without an enterostomy, by the short loop. There was apparently a cicatrix at the pylorus, and the pylorus was reddened, but not adherent. Following the operation there was persistent vomiting, the quan-

tities varying from 2 to 4 ounces two to six times daily. Lavage obtained large amounts—1 to 3 pints—of greenish, foul fluid. The patient began to lose weight, and failed continuously.

On October 16, one month after the first operation, the abdomen was again opened. Some adhesions were found beneath the line of suture, but the anastomosis was technically perfect, the stoma being wide open. There were no adhesions about the pylorus nor in the region of the anastomosis; there was marked dilatation of the stomach and of the entire duodenum. The pylorus was divided, and the ends of the duodenum and of the stomach turned in and closed. The operation was followed by gradual improvement. The vomiting continued, but it was less frequent and gradually subsided entirely, although lavage still brought back some bile-stained fluid. Eleven days after the operation, the patient, while vomiting, burst open the abdominal wound, there having been no effort at repair on the part of the tissues. This was due partly to the patient's asthenic and starved condition and to the fact that the incision of the second operation was in the median line and opposite the first incision. The wound was resutured under cocaine with through-and-through stitches of silkworm gut.

The patient slowly improved after the second operation, and was now nearly able to return to work. There was still, however, evidences of regurgitation of intestinal contents into the stomach. An examination made during the past week showed that on fasting, 120 c.c. of greenish fluid, containing considerable mucus, bile and blood, were withdrawn from the stomach. Total acidity, 20; free hydrochloric acid, 14. At another examination after a test breakfast, 400 c.c. of greenish fluid was withdrawn, with a total acidity of 18; free hydrochloric acid, 4.

On inspection of the abdomen a peristaltic wave could be seen passing from left to right across the epigastrium and upward along the right rectus muscle to the costal margin at the eighth chondrosternal articulation.

Dr. Blake commented on the fact that a gastro-enterostomy with a short loop, even though placed at the most dependent part of the stomach and with the opening directed in the manner that Mayo had recommended, might be followed by the "vicious circle" when the pylorus was open. The division of the pylorus in this case, although improving the patient's condition, had not

proved an absolute remedy, inasmuch as there was still regurgitation of the intestinal contents into the stomach. It was also interesting to observe that although the pylorus was closed and the stoma was open, there was still an effort, as evidenced by the peristaltic wave, on the part of the stomach to force its contents through the pylorus.

DR. CHAS. H. PECK presented a man, sixty-six years old, who was operated on for carcinoma of the stomach on July 13, 1906, a partial gastrectomy by Mayo's method being done. The patient's symptoms had been gradually increasing for a period of more than five years, probably indicating that the growth developed in the base of an old ulcer. This case had already been reported in full at a meeting of the New York Surgical Society on October 24, 1906. The patient had continued to gain in flesh and strength; he could eat solid food in ample quantity without distress, and weighed 35 pounds more than at the time of operation.

PERFORATIVE LESIONS OF THE STOMACH.

DR. CHARLES H. PECK presented the following cases:

CASE I. *Perforation of the Stomach, with Spreading Peritonitis.*—A male, forty-two years old, was brought to Roosevelt Hospital on June 9, 1906, who had been taken suddenly ill with violent abdominal pain while walking in the street that morning. The pain was not relieved by an injection of morphine, and he was sent to the hospital by his physician late in the afternoon. He had been operated on about five years before for an abscess in the epigastric region, and had suffered more or less from indigestion ever since.

On admission, he presented the signs of an extensive peritonitis, with generalized tenderness and rigidity, and moderate distention. The symptoms were most marked in the right half of the abdomen, as low as the iliac fossa. A diagnosis was made of perforative appendicitis, with spreading peritonitis, and an immediate operation was done, about ten hours after the onset of the pain.

The appendix was removed through an intermuscular incision, and showed no evidence of disease excepting moderate inflammation of its external coats. There was a large quantity of turbid fluid of aromatic odor and showing oil droplets, free in the peritoneal cavity. The wound was closed, and a median incision

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made in the epigastric region. A perforation on the anterior wall of the stomach was found, through which the stomach contents were escaping. The perforation was closed by a purse-string suture, buried by silk Lembert's sutures. The peritoneal cavity was thoroughly flushed out with saline solution through a Blake tube, and the wound was closed, excepting at the point of emergence of a cigarette drain, which was left down to the site of the perforation.

The patient's convalescence was uninterrupted. The wounds healed promptly, and he left the hospital on June 28, nineteen days after the operation. He had since remained in good health and without pronounced gastric symptoms.

The aromatic odor of the fluid that had been found in the peritoneal cavity, and the oil droplets which it contained, were afterwards accounted for by the statement of the patient that he had taken some fragrant preparation of castor oil shortly after the onset of his pain.

CASE II. *Perforated Gastric Ulcer; General Peritonitis.*—A female; twenty--three years old, was operated on December 17, 1905, for perforated gastric ulcer with generalized peritonitis. Symptoms of perforation had occurred twenty-nine hours before operation. The same technique was employed as in his other cases of perforation, and the patient made a good recovery. She gained in weight, and was now able to take a variety of solid foods without distress. She was presented at a meeting of the New York Surgical Society on February 28, 1906, and had now remained free from symptoms of ulcer for more than a year, in spite of the fact that no gastro-enterostomy was performed.

Dr Peck said that in addition to the two cases of acute perforation presented, he had operated upon four others during the past three years. Two of these, operated upon at four and six hours respectively from the onset of symptoms of perforation, made good recoveries, and both were well when last heard from, but could not be located at the present time. Both were shown before the New York Surgical Society on February 24, 1904. Two others, one operated on at thirty-six and the other at fifty-three hours after perforation, died of peritonitis, which was well advanced in each case at the time of operation. The same technique was employed in all six cases of acute perforation. Gastro-enterostomy was not performed, and the only drain used was a

single cigarette down to the site of perforation in event of leakage. No leakage of the stomach contents occurred in any of the six cases, although the infiltration surrounding the perforation was so great in several of the cases as to render satisfactory suturing very difficult.

CASE III. *Chronic Gastric Ulcer; Gastro-enterostomy.*—A married woman, forty years old, was taken ill in September, 1905, with pain after eating, and vomiting. Prior to that she had always enjoyed good health. She was a moderate beer and tea drinker. Two weeks after the onset of her illness she vomited blood, and for several days her stools were tarry. The pain and vomiting persisted, and the patient lost flesh and strength. On February 23, 1906, she had another attack of hæmatemesis, followed by tarry stools. She was brought to the hospital and remained under medical treatment until the following April. Her pain and vomiting recurred soon after resuming work, and on August 11 she had another gastric hæmorrhage. Her pain always occurred soon after eating, and was relieved by vomiting. It radiated to the back and left shoulder. There was tenderness over the epigastrium. She had lost about 44 pounds in weight and was very pale. An examination of the blood showed 40 per cent. of hæmoglobin; red blood cells, 3,200,000; free hydrochloric acid, present. The case was regarded as one of chronic gastric ulcer.

Operation, August 24, 1906. An incision was made to the right of the median line, and the stomach drawn into the wound. Signs of ulcer were found on the anterior surface, near the middle of the lesser curvature. The omentum was adherent over the site of the ulcer, and the wall of the stomach was thickened and indurated. A posterior gastro-enterostomy was done by suture, with the short loop. The direction of the gut was from right to left. The opening was 1½ inches long, and was closed by two rows of silk sutures. The edges of the wound in the mesocolon were sutured to the stomach with catgut, and the wound was closed layer by layer, without drainage, with catgut, chromic gut, silkworm and silk.

The patient was allowed water by the mouth after twelve hours, and peptonized milk on the second day. Soft solids on the seventh day. No vomiting or pain followed the operation, and her convalescence was uneventful. She was out of bed on

the eighteenth day, and left the hospital, well, two days later. She had since remained well, and had gained 15 pounds in weight. She was able to eat solid food without distress.

GASTRIC AND INTESTINAL LESIONS.

DR. LUCIUS W. HOTCHKISS presented a series of cases, as follows:

CASE I. *Pyloric Stenosis from Old Ulcer; Posterior Gastro-enterostomy.*—A boy, nineteen years old, was admitted with a long-standing history of stomach trouble. His family history was negative. He stated that he had had an osteomyelitis of the lower jaw when he was twelve years old, which prevented him from eating solid food for a period of four months. He was operated on at the time, and a greater part of the jaw was removed. It was fair to assume that during his illness he had a more or less constant septic discharge into the mouth, which, together with his inability to chew, might probably be regarded as a causative factor in the stomach trouble, which began to disturb him seriously about three years later.

About four years ago he began to have a steady, non-radiating pain in the region of the stomach, which was at first relieved somewhat by eating. For over three years he had no other symptoms. Then he began to vomit regularly, about half an hour after each meal. The vomitus was copious and sour to the taste. It had never contained blood. He also complained of eructations of gas. His appetite remained good, but the food was not long retained. During the past few months he had lost 20 pounds in weight.

Physical examination showed a poorly nourished boy, of small frame. There was slight tenderness in the epigastric region, and the stomach was visibly dilated. He had been treated under various diagnoses for many weeks without much benefit, although systematic lavage had relieved him somewhat, but he was growing constantly weaker. A gastric analysis showed a total acidity of 70; free hydrochloric acid, 44. A blood test was negative.

A gastro-enterostomy was done on December 29, 1906, from which the patient made an uninterrupted recovery. He had not vomited since the operation, and had gained 14 pounds in weight. The operation done was a posterior gastro-enterostomy by suture

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after the latest method described by Mayo. It was easily performed, although there was the scar of an old ulcer, and adhesions on the posterior surface of the stomach, almost at the point selected for the anastomosis.

CASE II. *Cyst of the Mesentery of the Small Intestine; Torsion of Cyst on its Pedicle, with Strangulation and Obstruction of the Small Intestine; Beginning Peritonitis; Removal of Cyst; Resection; End-to-End Anastomosis of Gut with Murphy Button; Recovery.*—A woman, fifty years old, was admitted to Roosevelt Hospital on August 28, 1906. Her family history was negative. Her menses recurred four years after the supposed menopause, and the flow lasted a month, accompanied by cramp-like pains. This was one year ago. Since then there had been no vaginal discharge. The patient stated that twenty years ago she had an attack of illness similar to the present one, but without swelling of the abdomen. That attack lasted about a month. For the past two years she had lost flesh and strength.

One month before admission, after exertion, she had a sharp pain in the left side of the abdomen in the nipple line. This lasted about a week. During this period she also had looseness of the bowels, but she was not compelled to give up her work. About eleven days before coming to the hospital she was seized with a sharp, tearing pain in the abdomen, radiating from the right iliac fossa. She vomited frequently, felt "hot and cold," had diarrhœa, and later her abdomen began to swell. She said her vomitus was "black and sour."

When the patient was admitted to the hospital, her symptoms still persisted, and there were undoubted indications of intestinal obstruction. Examination showed a thin, little woman, with a much distended abdomen, and slight tenderness low down in the right iliac fossa. There was dulness in both flanks, and general abdominal distention, which was most marked in the epigastrium.

Operation, August 28, 1906: An incision was made through the right rectus, below the umbilicus. On introducing the hand into the peritoneal cavity to locate the seat of obstruction, a large cystic tumor was felt which was at first thought to be ovarian, but on bringing it into view it proved to be a cyst growing from the under layer of the mesentery of the small intestine. It had a considerable pedicle derived from the mesentery, and was rotated upon this pedicle, much as an ovarian cyst might be. In

its rotation, it had caused a complete obstruction, as well as strangulation and gangrene of the loop of gut involved, and about this loop, which ruptured when it was released, there was a considerable area of advancing peritonitis. The cyst was removed, and about 8 inches of gut resected. The ends of the gut were rapidly joined with the Murphy button, as the patient's condition was not promising. The abdominal wound was closed after irrigation of the peritoneal cavity with hot, normal salt solution. The convalescence was stormy, and in the course of a few days a fæcal fistula developed; this at first discharged very profusely, but the amount gradually decreased, and the patient was sent home. She subsequently returned with a small, slightly discharging fistula, which is to be repaired by operation.

The cyst that had been removed was structureless, and contained clear fluid. The loop of excised intestine was reported by the pathologist to be gangrenous. The case was regarded as remarkable in that the cyst was pedunculated and very evidently the cause of the obstruction by producing a kink of the loop of small intestine at some distance from it. It was remarkable also in that it could be tied off from the mesentery without cutting off the circulation to the corresponding segment of gut which was distended above the point of obstruction. The cyst was pear-shaped, with moderately thick walls, and was about 5 inches long.

CASE III. *Adenoma of the Cæcum; Perforation; Abscess, Simulating Appendicitis; Resection of Cæcum; Lateral Anastomosis between Ileum and Ascending Colon by Suture.*—A boy, twenty-two years old, was admitted to Roosevelt Hospital on August 1, 1906. Four weeks prior to that date he had an attack of pain in the appendiceal region, and noticed a feeling of "hardness" in that locality. The pain and tenderness had lasted for two or three days, but he kept at work. The pain was dull in character, and did not radiate. A week ago he had a milder attack of pain in the same region, and noticed a lump which gradually increased in size. The pain was worse after a day's work. He kept at his occupation, however, which was that of a grocer's clerk, until the day of his admission, when he came to the hospital to find out what the lump was. He had had no chills nor vomiting, and had not noticed that he was feverish. His bowels for the past month had been regular under the use of

laxatives. He had a slight cough. His general condition was fair. His urine showed a slight trace of albumin. His temperature, on admission, was 100 degrees F.; pulse, 112. The abdomen showed a slight bulging in the right iliac region, and there was a slight sense of rigidity on that side, low down. In the right iliac fossa there was a smooth, rounded mass, about the size of an orange. This was slightly tender and flat on percussion. It seemed to be attached to the posterior wall of the abdomen. The leucocyte count was 16,400.

Operation, August 2, 1906: The muscles were split over the site of the mass in the right iliac fossa, and the incision extended when the true nature of the case was discovered. On opening the peritoneum, an encapsulated abscess was found, and the appendix was sought for and removed. As the latter organ did not show sufficient change to account for the patient's condition, a further exploration was made, and a growth involving the cæcum was discovered. The wall of the cæcum was soft, and easily perforated by the finger. The wound was enlarged by means of Weir's incision through the posterior rectal sheath, and through this the cæcum was readily isolated and delivered. The cæcum and lower end of the ileum were resected, their respective ends turned in by suture, and a lateral anastomosis effected by suture between the side of the ileum and the side of the ascending colon.

After the first week, the patient's convalescence was uneventful, and he was discharged, well, in about a month. Since then he has steadily improved in weight and strength, and he is now enjoying excellent health. The pathologist reported the growth to be an adenoma.

CASE IV. *Intra-abdominal Omental Torsion; Resection of Omentum; Recovery.*—A man of twenty-nine was admitted to Roosevelt Hospital on August 3, 1906, with the following history: Five days before admission a right-sided hernia, which had been down, reduced itself spontaneously and without pain. About the same time the patient began to have pain in the right iliac fossa. This was of a sharp, non-radiating character, which persisted and gradually grew worse. There was no history of chill nor vomiting, and no urinary symptoms. The bowels had been regular up to the time of admission. The patient had worked until two days before, and had then taken to his bed on account of

the increasing pain and the abdominal discomfort. He had had a right inguinal hernia for the past six years, which had always been reducible. During the past year the patient had worn a truss.

On admission, the patient's general condition was good. There was slight abdominal fulness on the right side, especially over the appendix. There was marked rigidity of the right rectus muscle, and a palpable mass in the appendiceal region, extending into the pelvis. This mass was moderately tender. The patient's temperature, on admission, was 101.6; pulse, 128; respirations, 24; leucocytosis, 15,200.

Operation, August 4, 1906: On account of the uncertainty of the diagnosis, a Kammerer incision was made through the right rectus, which was later extended upward above the level of the umbilicus to allow room for the necessary manipulations. On opening the peritoneal cavity, some bloody serum escaped, and a large mass was discovered occupying the lower abdomen and pelvis. This was finally made out to consist of omentum, twisted upon itself, hardened and infiltrated with serum, and apparently strangulated. The appendix was somewhat involved in the infiltration, and was removed. The omentum was found to be adherent at some point in the pelvis near the brim, and to the side of the appendix, but it was easily torn away. The internal inguinal ring was examined, and it was free from omentum. The omentum was ligated close to the transverse colon and removed.

The specimen proved to be a large mass of strangulated omentum, twisted about eight times around a narrow pedicle close to the transverse colon. The whole mass was spindle-shaped, and resembled a hepatized lung in color and consistency. It measured about 10 inches long and about 6 in diameter at its thickest point. The twists were in the long axis, and from right to left. The tip was beginning to become necrotic. The weight was between 5 and 6 pounds.

The patient had some abdominal distention on the day following the operation, but his convalescence was otherwise uneventful. The specimen, which was also shown by Dr. Hotchkiss, had preserved most of its color and contour, and illustrated fairly well the condition found at the time of operation. The patient had been perfectly well since.

A CRITICAL REVIEW OF A RECENT SERIES OF OPERATIONS UPON THE STOMACH.

DR. GEORGE EMERSON BREWER read a paper with the above title, for which see page 687.

In connection with this paper, Dr. Brewer showed a series of cases of benign lesions of the stomach upon which he had operated at Roosevelt Hospital.

DR. ARPAD G. GERSTER said that the report of the failures so frankly included by Dr. Brewer in his interesting paper could probably be duplicated by every surgeon who had occasion to do these operations for gastric disturbance. The lesson to be drawn from such experiences was that the surgeon should be extremely conservative, especially in dealing with women, and refuse to operate in the absence of symptoms indicative of definite and characteristic pathological changes. Among his curative failures Dr. Gerster reported a case of posterior gastro-enterostomy with the Murphy button, done for the relief of a spastic stenosis, in which, probably on account of some defect in its make-up, the button failed to come away, and a radiograph showed that it was still *in situ*. The stomach was again opened, and the button withdrawn. About a month later the patient again began to complain, and upon re-opening the stomach for the third time a stenosis was found at the previous site of the button, for the relief of which a Heineke-Mikulicz plastic operation was done, and further recovery was uneventful, but the original gastric complaint remained little improved.

The speaker said he had met with cases of gastric neurosis in which the subjective symptoms were of the most puzzling and complicated character, and in which new symptoms were constantly cropping up. Dr. Mayo had recently told him that in dealing with gastric disorders in women, in the absence of hæmorrhage, or of symptoms of stenosis or tumor, demonstrated by a probatory incision, he would refuse to make anastomosis. With the present more precise methods of diagnosis that the surgeon had at his command, the results of operations upon the stomach were steadily improving. Care should be taken, however, not to confound reflex with intrinsic symptoms, and we were justified in doing gastro-enterostomy only where there were demonstrable symptoms of such gravity that they could not be mistaken. The

speaker said that of 26 gastro-enterostomies done in his service at Mt. Sinai Hospital during the past five years for ulcer and stenosis, including 2 resection, there were only 2 deaths. Once only a condition resembling a "vicious circle" developed, which was corrected by a subsequent anastomosis between the two legs of the small intestine. In all these operations, as well as in a far larger number of cases of carcinoma, the Murphy button was usually employed, and, with the exception of the case he had already referred to, he had never seen any untoward effects from its use. He could not say the same in regard to its use in entero-enterostomy. He had found it especially serviceable in cases where a rapid operation was indicated. While theoretically the suture method was better, nevertheless, the use of the button should not be neglected, and the surgeon should be able promptly to resort to it in cases where it was indicated.

DR. CHARLES L. SCUDDER, of Boston, said the results of the operations presented in this series of stomach cases are very satisfactory. Cases of carcinoma of the stomach are to be grouped into two large classes: first, those which, in the absence of adhesions and visible metastases, lend themselves to a partial gastrectomy; and, second, those in which, in view of pyloric stenosis or interference with gastric motility, a gastrojejunostomy is indicated. The perfection of technique and the slight shock attending a partial gastrectomy are suggestive that a partial gastrectomy will be applicable to certain cases which hitherto have been treated by a gastrojejunostomy. In other words, partial gastrectomy may serve as a palliative operation. In certain well selected cases partial gastrectomy will afford a life of greater comfort than that following a gastro-enterostomy. This thought is suggested by the report of the cases shown.

DR. HOWARD LILIENTHAL, in referring to the technique of gastro-enterostomy, said there was one point in connection with the method that he had learned quite by accident, and he had employed it during the past two years with much satisfaction. Briefly, it was this: A hat-pin was inserted through the loop of intestine and another through the stomach at the points where the anastomosis was to be made. The sharp ends of the pins were then buried in small corks, while the heads of the pins were held by an assistant. The posterior walls were then closed by two layers of sutures, the pins removed and the line of union com-

pleted. The needles gave the surgeon an absolutely safe landmark for his incision, and he could feel assured that the deep sutures had included all of the coats, thus insuring absolute hæmostasis.

Dr. Lilienthal said he had recently operated on two cases of congenital pyloric stenosis, one at the age of seven weeks; the other at nine weeks. In both of these he used the hat-pin method. The use of the Murphy button was out of the question, as the small intestine was not larger than an ordinary lead-pencil. The first case made a perfect recovery, and was still alive and well after three months. In the second case, the child's recovery was interrupted by the necessity of a mastoid operation, and died from the added shock.

Dr. George Woolsey referred to a case which was operated on two years ago last summer. There was an indurated mass involving the pylorus, which was supposed to be a carcinoma. A gastro-enterostomy was done, and in the course of time there was a complete disappearance of the mass, which was doubtless an indurated ulcer instead of a new growth.

In speaking of the cases of gastric neurosis reported by Dr. Brewer, Dr. Woolsey mentioned the case of a woman who developed severe gastric symptoms after a curettage. She was treated for several months on the medical side of the Presbyterian Hospital, but the vomiting and emaciation persisted. She was finally transferred to the surgical side, and a gastro-enterostomy was done, but without marked improvement.

Stated Meeting, February 13, 1907.

The President, DR. GEORGE WOOLSEY, in the chair.

THREE LAPAROTOMIES IN AN INFANT.

CHARLES A. ELSBERG presented an infant who was ten months old when he was first seen by Dr. Elsberg on April 30, 1906. Two days prior to that he had swallowed a button. The physician who was called gave the child a dose of castor oil, after which the button was passed, with considerable colic. The cramps persisted and grew worse on the following day. The bowels refused to move, the abdomen became distended and vomiting set in. On the third day of the illness the vomiting became more frequent, the abdomen was tender and much distended, and a tumor was felt in the left iliac region. In addition to this, by bimanual palpation, a mass was felt in the right iliac region.

A diagnosis of intussusception was made, and the abdomen was opened a few hours later. There was considerable free fluid, and an ileocæcal intussusception which extended into the sigmoid flexure. The reduction was exceedingly difficult. The last few inches of the ileum were much swollen, the peritoneal coat was destroyed, and the adhesions so firm that they could hardly be separated. Reduction was finally accomplished, and the abdomen was closed. The bowels moved twelve hours later, and in ten days the child was well.

Four weeks later, Dr. Elsberg was again called to see the patient. He learned that for eight hours the child had been vomiting, the bowels had refused to move, and the abdomen had become distended and tender. As soon as the child could be brought to the hospital, the abdomen was re-opened through the old scar. The ileum was found much distended, and the cæcum was constricted by a band. This was divided between ligatures, the bare surfaces were covered with peritoneum, and the abdomen was closed. Symptoms of shock persisted for twenty-four hours; then fæcal matter was passed, and the child's general condition improved. After ten days recovery was complete.

Six weeks later, when the child was just one year old, he was again called to see the patient. There had been, for twenty-

four hours, symptoms of intestinal obstruction. The abdomen was again much distended, and cathartics and high and low enemata had been ineffectual in moving the bowels. The child was vomiting feculent material, which was a very rare symptom in one that age. By bimanual examination, a distended loop of intestine was felt in the umbilical region. The patient was almost in a state of collapse. Again the abdomen was opened through the old scar. The intestines were enormously distended, rendering much manipulation impossible. A band was found which had strangulated a loop of ileum; this was divided between ligatures, and covered with peritoneum. On account of the poor condition of the patient, further manipulations were deemed inadvisable, and the abdomen was closed. The child made an uneventful recovery from this third laparotomy, and had since remained well.

NEPHRECTOMY FOR HYDRONEPHROSIS.

DR. F. TILDEN BROWN presented a woman who had been operated on about three weeks ago, and the chief reason for presenting her was to call attention to the fact that in these cases of hydronephrosis a positive diagnosis could be so readily made by ureteral catheterization tests.

The salient facts of the case were that she had a rapidly growing tumor on the right side, which eventually attained the size of an adult head. A diagnosis of kidney tumor was established by ureteral catheterization, and this was verified upon exposing the kidney through the usual lumbar incision. Upon separating the fatty tissue capsule, an area was exposed where the kidney cortex was so much attenuated that urine escaped. The kidney was thereupon removed, as even a very careful reposition of the organ would not have been a safe procedure.

The woman made an uninterrupted convalescence, and in presenting her Dr. Brown made a plea for a more exhaustive preoperative examination and diagnosis in cases of probable kidney tumors.

CYSTOTOMY FOR LARGE VESICAL CALCULUS NOT DEMONSTRATED BY THE X-RAY.

DR. BROWN presented a man who came under his observation about a year ago. His symptoms indicated the presence of a vesical calculus, and upon cystoscopic examination a large stone

could be both seen and felt. Several very careful radiographic exposures had failed to reveal the presence of the stone in the bladder.

The vesical calculus was removed by suprapubic cystotomy, and the man made an uneventful recovery from the operation. He had some residual urine prior to the operation, and he was still incapable of completely emptying his bladder, although there were no evidences of prostatic enlargement. There was loss of sexual inclination and ability since the removal of the stone. In connection with this feature, the speaker called attention to the fact that Dr. Howard Lilienthal had always maintained that its possible occurrence was an argument in favor of suprapubic prostatectomy instead of the perineal operation.

In reply to a question, Dr. Brown said the stone was composed of urate of soda and uric acid.

Dr. Alexander B. Johnson said it was in his experience always impossible to detect stones of that composition with the X-rays. Stones containing uric acid or urates merely were, however, rare, and the usual small percentage of oxalate of lime in such stones rendered their detection comparatively easy in most cases; as he had pointed out in a paper published some years ago.

Dr. Brown said that after the removal of the stone from the bladder, Dr. Caldwell had found no difficulty in getting an excellent radiographic picture of it. The composition of the stone was the main reason for the failure of the X-ray to detect it while it was in the bladder.

Dr. Charles H. Peck said he had had a similar experience with a stone about half the size of the one removed by Dr. Brown. The X-ray pictures in that case were taken by Dr. Cole at Roosevelt Hospital, and failed to show the presence of the stone in the bladder, although the usual landmarks of the pelvis were clearly defined.

Dr. Woolsey said that he also had had a similar experience in a case of renal calculus, where a stone of considerable size was removed from the pelvis of the kidney subsequent to negative radiographic findings.

LARGE BRANCHED CALCULUS IN EACH KIDNEY.

Dr. Brown presented radiographic pictures, which were taken by Dr. Caldwell, and which showed, in a striking manner,

the presence of a large calculus in each kidney. In reply to a question, Dr. Brown said there were no evidences of infection of the kidney in this case, and the urine was not particularly faulty. The patient had not yet been operated on.

DR. WOOLSEY said he had at present under his observation a case in which a large branched calculus had been removed from one kidney. In that case, both kidneys had become infected, and on that account a nephrectomy was out of the question, although the kidney that had been operated on showed marked evidences of destruction by the suppurative process. The ultimate outcome of the case was only a question of time.

STONE IN THE URETER.

DR. BROWN presented a young man who had been referred to him by Dr. John Rogers. The history of the case dated back for several years, during which period the patient had suffered from repeated attacks of pain in the lower abdomen, which had been pronounced by various physicians whom he had consulted as bilious attacks, or as attacks of appendicitis.

When Dr. Rogers saw the patient, he suspected that the pain might be connected with the kidney, and an X-ray was taken which showed a stone in the ureter just below the sacro-iliac synchondrosis. Palliative treatment was tried for a time without any result. One evening, about three weeks ago, while the patient was on his way home from business, and after two days of very constant pain in the region of the lower ureter, he had a sudden inclination to void urine. While performing the act, there was a sudden, painful stoppage of the flow, followed by the spontaneous discharge of a hard object which was lost. Upon his arrival home, he found that his clothing was blood-stained, and the urethra continued to ooze blood for some time. X-ray pictures taken since that time had been negative, and the natural deduction was that the ureteral calculus had been expelled spontaneously. Dr. Brown said the case was a good illustration of the fact that in dealing with ureteral calculi, we should not rush to operate unless the symptoms were grave and urgent.

DR. JOHN ROGERS said the case was also a good illustration of the fact of how easily a mistaken diagnosis of appendicitis could be made. This patient had consulted at least three members of the New York Surgical Society, and in each instance he was

told without hesitation that he should be operated on for appendicitis. Subsequently, his attending physician in the country detected a little blood in the urine, and this fact, Dr. Rogers said, had induced him to have the X-ray picture taken which revealed the ureteral calculus.

DR. WOOLSEY recalled one case of supposed appendicitis where the presence of blood in the urine led to the suspicion of ureteral calculus. X-ray pictures gave a negative result, but the patient subsequently passed a small uric acid calculus.

SARCOMA OF THE ULNA.

DR. WILLIAM B. COLEY presented a man, twenty-five years old, whose family history was good. On December 8, 1898, Dr. George Tully Vaughan amputated the right arm in the lower third for sarcoma of the ulna. The patient at that time gave a history of having had a "greenstick" fracture of the right ulna three years before, from which he recovered. Two and a half years later, the bone began to enlarge at the site of the fracture, and about three months later it broke at this point, as a result of throwing a stone or cob. Examination at that time (three years after the "greenstick" fracture) showed a spindle-shaped enlargement of the middle of the right forearm, the circumference being 1½ inches larger than the left. The surface temperature was distinctly higher than on the left forearm. The swelling was firm, semi-fluctuating, not tender, except at a point on the border of the ulna where motion and crepitus were felt. A skiagram showed a fracture of the ulna in the middle third and a mass springing from the upper border of the ulna and extending towards the radius. Subsequent exploratory incision showed this mass to be soft, like granulation tissue, attached entirely to the interosseous border and mainly to the upper fragment. A piece was removed for microscopical examination which was made by Drs. Kingdon and Sprague, who pronounced it round-celled sarcoma with a few spindle cells. The patient made a good recovery and remained well until February, 1906, when he noticed an increase in the size of his abdomen, but as he had no pain or discomfort from this swelling, he paid no attention to it. In the early part of October he began to have pain and consulted Dr. J. W. Perkins of Kansas City, Mo., who referred him to Dr. Coley. Physical examination made by Dr. Coley on October

29, showed the patient to be well nourished, having apparently not lost much weight, although he was anæmic. Right arm was absent; there was no local recurrence, nor were there any signs of a return of the disease in the axilla. Examination of the abdomen showed the same markedly protuberant and symmetrically enlarged. Palpation showed the abdomen filled with an enormous tumor, extending from the ensiform cartilage nearly to the symphysis pubis. The intestines are pushed over to the left side. Several large masses, each the size of a child's head, more or less independent from one another, could be made out. They seemed to start in the retroperitoneal glands or omentum. The patient was put upon the mixed toxins of erysipelas and bacillus prodigiosus on November 1, 1906, with little hope of doing him much good, but at the end of one month's treatment the masses in the abdomen had decreased in size so much that the circumference at the umbilicus was 5 inches less than when the toxins were begun. He is still under treatment and has improved very much in general health. He has had the toxins regularly up to the present time, in doses as high as 10 minims, four to five times a week. All the injections have been made in the pectoral region. He has had three intervals of rest, the last period for two weeks. He returned to the hospital yesterday and although he gained 5 pounds while away his tumors are distinctly larger. The tumors have apparently decreased one-half to two-thirds since the beginning of the treatment.

INOPERABLE SPINDLE-CELLED SARCOMA OF THE ABDOMINAL WALL AND PELVIS.

Dr. Coley presented a man aged thirty years. In December, 1892, the patient, then sixteen years of age, was seen in consultation with Dr. L. Bolton Bangs, at the Post-Graduate Hospital. The tumor was 7 by 4 inches in area, extended up nearly to the umbilicus and was deeply attached to the pelvis below and, in Dr. Bangs' opinion, the bladder wall was involved. The tumor was clearly inoperable and was growing rapidly. A section was removed and examined by Dr. H. T. Brooks, the pathologist to the hospital, who pronounced it a spindle-celled sarcoma. The patient was placed in charge of Dr. Coley by Dr. Bangs and was admitted to the New York Cancer Hospital early in February, 1893. The treatment with the mixed toxins of erysipelas and

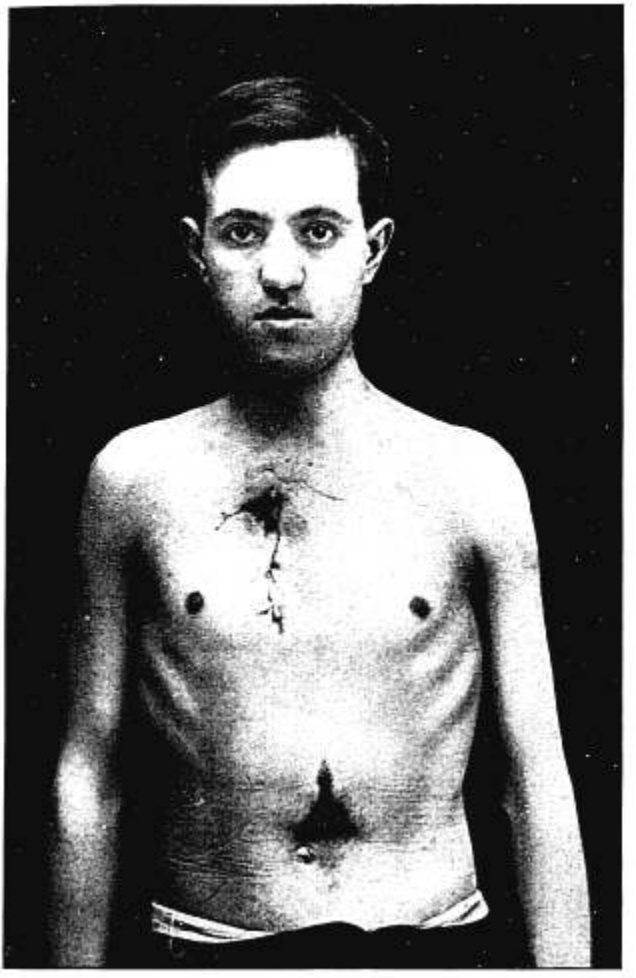
bacillus prodigiosus was begun at once by local injections into the tumor and kept up for nearly six months. At the end of this time the tumor had entirely disappeared by absorption, without breaking down. The patient was shown before the New York Surgical Society about seven years ago and has since been under occasional observation. He has been in perfect health since he left the hospital nearly fourteen years ago and there has never been any sign of local or general recurrence.

It may of interest to note that seven years ago he had a typical primary lesion of syphilis.

ŒSOPHAGEAL-THORACIC FISTULA.

Dr. William A. Downes presented a man, aged twenty-two years, whose previous history was negative. In April, 1903, he noticed a swelling on the right side of the chest which gradually attained the size of a small orange. After a week's poulticing it was incised and a quantity of dark-colored foul pus was evacuated. The discharge from this abscess persisted, together with a temperature elevation. The case was regarded as one of tuberculosis of the sternum, and the original incision was enlarged and the wound curetted. The patient improved temporarily, but in the course of six weeks he again applied for treatment, and the wound was again curetted. The wound failed to heal, and the patient was admitted to the General Memorial Hospital on October 15, 1903, and a radical operation for tuberculosis of the sternum was done two weeks later. Through a very large incision, the right half of the sternum was exposed, and a part of the gladiolus and manubrium was excised, together with a part of the 2, 3 and 4 ribs. In the median line there was an old sinus which could not be probed to its full depth.

Four days after this operation an orange pit was expelled through the wound, and from that time on food taken by the mouth escaped through the old sinus. The patient's condition became so poor that a gastrostomy was done on November 15, 1903, and for the following year he was fed regularly through the gastrostomy wound, and in that period he gained about 40 pounds in weight. Recently, Dr. Downes said, the patient had again begun to lose weight. The gastrostomy wound has not been allowed to close, but the patient was feeding himself in the usual way (Fig. 1). There was still, occasionally, a little leak-



Dr. Downes' case of œsophageal-thoracic fistula. Photograph taken one year after gastrostomy. Notice low position of opening into stomach, made necessary by enlargement of liver, due probably to congestion.

age of pus through the sinus in the chest wall. The man was up and about, and able to do a moderate amount of work. Pathological examination of tissue removed from the sternum showed no evidence of tuberculosis.

These cases of œsophageal-thoracic fistula, the speaker said, were very rare. When Dr. Osler reported a case in the Johns Hopkins Hospital in 1894 he was able to find only two similar cases on record. Since that time (in 1905) Dr. Alexander B. Johnson had reported one that came under his care in the New York Hospital.

Dr. Alexander B. Johnson said the patient shown by Dr. Downes had been under his care for some time at the New York Hospital, and he had twice operated on him for the tubercular process involving the sternum, but both operations were prior to the detection of the œsophageal-thoracic fistula.

In connection with this case, Dr. Johnson exhibited a photograph of a case of œsophageal-thoracic fistula that was under his care at the New York Hospital in 1905. The patient was a child with a supposed abscess of the lung, or empyema. A large tuberculous thoracic abscess was found and evacuated, and from that time on the child's food began to be expelled through the wound in the chest wall. In order to feed her, a gastrostomy became necessary. The child improved for a time, but in the course of a few weeks she developed a tubercular peritonitis and gradually failed and died.

Dr. Downes, in closing, said that the presence of a stricture of the œsophagus was eliminated by the fact that a normal-sized stomach tube could be passed. Upon one occasion, the fistula was filled with bismuth solution, and an X-ray picture was taken in an attempt to locate the opening into the œsophagus, but without any success. There were no indications of stricture, and no history of the patient having swallowed any acid or anything that would have been apt to cause a stricture. The etiological factor in the case had been regarded as a suppurating mediastinal gland, with involvement of the œsophagus, and final rupture. The speaker said he had seen two cases at St. Mary's Hospital for Children where sudden death was due to rupture of a suppurating mediastinal gland into the trachea. In the case he had shown, as well as in the one referred to by Dr. Johnson, the club-shaped condition of the fingers was very marked.

PERFORATING ULCER OF THE STOMACH.

DR. DOWNES presented a woman, thirty-three years old, with a history of ulcer of the stomach of several years' standing. In February, 1906, she was admitted to the General Memorial Hospital, and under appropriate treatment, her gastric symptoms disappeared, so that she was able to return to her home and resume her usual duties. Subsequently, however, her symptoms recurred, and on December 11, 1906, after drinking a glass of vichy and milk, she immediately experienced a violent pain in the epigastrium, and went into moderate collapse. She was seen at that time by Dr. Walton Martin, who regarded the case as one of probable perforated gastric ulcer.

When the patient was admitted to the hospital, she gave no history of vomiting. The abdomen was extremely hard and board-like. Operation seven hours after rupture. Upon opening the abdomen there was an escape of gas and free fluid in the peritoneal cavity. A perforation was found in the anterior wall of the stomach. It was large enough to easily admit the end of the index finger, and surrounded by an indurated area, which it was thought wise to excise freely. The wound, about 3 inches in length, was closed with three rows of sutures, first interrupted inverting and other two continuous; the abdomen was not washed out; a cigarette drain was left. The patient made an excellent recovery, and when she left the hospital on January 17 of the present year, she had gained 11 pounds in weight.

DR. BENJAMIN T. TILTON said that during the past two years he had seen ten cases of perforated gastric ulcer, mostly in men of middle age with an alcoholic history. Dr. Downes' case was the first he had seen in a female, although according to the literature it was more common in women than in men.

DR. CHARLES H. PECK said he had operated upon seven cases of perforated gastric ulcer in the past three years, two of them in women and five in men. In several of the cases, the patients were between twenty and thirty years old. Six of them were acute. He had done one recently in which the perforation was of long standing, with adhesions of the edges of the ulcer to the anterior abdominal wall in the left upper quadrant of the abdomen.

DR. JOHN F. ERDMAN said he had had thirteen cases of per-

forated gastric ulcer, four or five in women. The rest were men. In a recent case that came under his observation the perforation was in the cardiac end of the stomach, which he considered was a rare occurrence.

DR. WOOLSEY said he could recall only one case of perforated gastric ulcer in a male subject, and that was not an acute case, and was complicated by adhesions to the under surface of the liver. He recalled another case of carcinoma in the male, with perforation of the stomach wall. All his other cases had been in females.

GUN-SHOT WOUND OF THE ABDOMEN INVOLVING THE SPLEEN.

DR. GEORGE E. BREWER presented an unmarried woman, twenty-three years old, who was brought to the Roosevelt Hospital in December, 1906, suffering from a gun-shot wound of the abdomen. Upon admission, she was apparently in a moderate degree of shock; her face was pale and the pulse weak, but not particularly accelerated; temperature normal. She complained of severe pain in the left upper quadrant of the abdomen, which was increased on deep inspiration. Examination revealed two bullet wounds, one situated anteriorly, between the eighth and ninth ribs, about 3 inches to the left of the median line; the other on the posterior lateral aspect of the chest at about the level of the tenth intercostal space. As she stated that her assailant stood in front of her, it was probable that the anterior wound was the point of entrance of the bullet.

Examination of the chest was negative. Palpation of the abdomen showed marked rigidity over the entire left side, particularly in the hypochondriac region. Upon opening the abdomen, a fairly large quantity of fluid and clotted blood was found in the peritoneal cavity. As the blood seemed to flow from the region of the spleen, that organ was with considerable difficulty drawn into the abdominal wound. The bullet had evidently penetrated just above the hilum, making a deep groove along the inner surface and free edge. It then penetrated the chest wall, and emerged at the posterior opening. An attempt was made to close the wound in the spleen by mattress sutures, but this failed on account of the friability of the tissues.

As the hæmorrhage was readily controlled by gauze pressure,

a large Mikulicz tampon was introduced, and the spleen pushed back into position. A separate opening was made for the gauze drain, so that in its removal it would not drag the spleen out of place and thus reopen the wound. A hasty examination of the stomach and intestines was made, the abdomen was washed out with salt solution and the wound closed.

The patient made an uneventful recovery. The gauze was allowed to remain in place for ten days, when it was removed without difficulty.

ABSCESS OF LEFT LOBE OF LIVER.

DR. BREWER presented a man, forty years old, who was admitted to the Roosevelt Hospital in September, 1906, in a state of septic intoxication. His mind was clouded, and he could give very little information as to the character of his early illness. He complained of vague pain in the upper part of the left side of the abdomen and thorax, which was increased on deep respiration. His temperature was 103; pulse, 120; leucocytes, 18,000. On examination, there was moderate tenderness in the epigastric and left hypochondriac regions, with some muscular rigidity, and an increased sense of resistance on deep pressure. No definite mass could be felt. On auscultation there was diminished respiration over the lower left back, with entire absence of fremitus and marked dulness over the lower 3 inches of the pulmonary area.

Exploratory puncture of the chest gave no evidence of pleuritic effusion. The pulse and temperature remained high, and the patient became somnolent and delirious. An exploratory incision was made through the middle of the left rectus muscle. Upon opening the peritoneum, it was found that the left lobe of the liver was much enlarged and œdematous, and partly attached to the parietal peritoneum by fibrous adhesions. An exploring needle introduced to the depth of 5 or 6 cm. withdrew creamy pus. The liver was then stitched to the parietal peritoneum, and the external wound packed with gauze. Forty-eight hours later the liver was incised, and about a pint of creamy pus evacuated. The finger introduced between the incisions revealed the fact that the abscess was of the subphrenic variety.

Although considerable relief followed the draining of this abscess, the temperature never dropped to normal, and as the

tenderness also persisted, it seemed evident that the pocket was imperfectly drained or that some other focus was present. The pus cavity was thereupon washed out, with considerable improvement. The discharge diminished, and the wound surface was apparently healthy. The patient's appetite and color also improved, and he said that he felt better, but still complained of pain in the side.

Shortly after this period of improvement, his temperature rapidly rose, and he developed some cough and severe pain on deep inspiration. Examination of the thorax showed a large area of flatness, with absence of respiration and fremitus. Exploratory puncture was negative. He continued to grow worse, and remained for some days in a profound septic state, which was thought to be due to a complicating pneumonia. Later, he had chills, with definite daily remissions of temperature, and sweating. He was again aspirated, and pus was finally reached at a great depth from the surface. Under general anæsthesia, about 3 inches of the ninth rib were resected; the pleura was then opened and the cavity was found to be free from fluid. A needle introduced through the diaphragm, after penetrating a mass of solid tissue, entered a pus cavity and withdrew a quantity of chocolate-colored, foul smelling pus. The diaphragm was sutured to the parietal pleura, and the external wound was packed with gauze. Two days later an incision was made into the liver substance, opening the abscess cavity, and a large quantity of pus evacuated.

A rapid improvement followed the drainage of the abscess, which was apparently situated in the left lobe of the liver, and which could not be demonstrated to have any connection with the anterior abscess cavity. From that time on, the patient's convalescence seemed to be established, although on two or three occasions a retention of the secretion would give rise to a sudden temperature, but these attacks were always relieved by establishing better drainage. The patient's illness extended over a period of four months, and he eventually made a satisfactory recovery.

BLEPHAROPLASTY BY PREGRAFTED FLAP.

Dr. C. L. Gibson showed a woman whom he had operated on two and a half years ago for an epithelioma of the outer third of the lower eyelid. The operation was done in two stages. A horizontal incision through the skin 1½ inches long was made,

starting at the outer canthus. This flap was undermined to a depth of an inch, making a pocket into which was introduced a skin graft with its raw surface looking towards the undermined skin. Three weeks later when the flap had shrunken somewhat and was perfectly lined with its skin graft the flap (Dieffenbach) was completed by two parallel vertical incisions. The whole thickness of the outer half of the eyelid was now excised and the flap swung into the defect.

The result was an admirable imitation of the normal eyelid. The skin graft in its new position quickly took on the qualities of mucous membrane and the flap continues to be non-adherent and with a well defined free edge.

There is now, after two and a half years, a little sagging downward of the flap as a whole, a disadvantage inherent to any flap with tension below, but the free eyelid is perfect in looks and function.

This is a new principle in making new eyelids. To get a perfect result, however, it ought to be applied to some other form of flap free of the disadvantages of the Dieffenbach flap.

PLASTIC OPERATION FOR CONGENITAL HABITUAL DISLOCATION OF PATELLA.

Dr. Charles A. Elsberg presented a boy, fourteen years old, whose right patella had been freely movable from birth. When the leg was flexed to any degree, the patella would become dislocated. As the child grew older, this occurrence became more and more common, and practically incapacitated him. When the limb was in an extended condition, the patella was approximately in its normal position, but as soon as the leg was flexed to 45 degrees or beyond, the patella, after becoming fixed on the external condyle, would suddenly be dislocated outwards and backwards so as to lie in the outer part of the popliteal space.

Dr. Elsberg said that various operations had been described in order to remedy this condition of habitual dislocation of the patella, but none of them had given uniformly good results. The condition was supposed to be one to the absence of the prominence of the external condyle, or to a defect of the muscles or tendons on one side or the other. The method described by Krogius, of Sweden, and which Dr. Elsberg followed in this case was this:

The patella is exposed by a long curved skin incision passing downwards from the middle of the thigh to the upper part of the leg. The skin is dissected up from the deeper parts. From the tissue to the inner side of the patella, a long flap is raised, extending from the middle of the thigh to the upper part of the tibia. This flap is made at least 2 inches wide, remains attached above and below, and consists of all the tissues from the fascia down to the synovial membrane of the knee joint. After the flap has been raised, it is sewn into a gap in the tissues to the outer side of the patella, which is made by incising the tissues to the outer side of the knee cap from above downward. The gap left by raising the flap on the inner side is closed by interrupted sutures. By this means the tissues to the outer side of the patella are lengthened, those to the inner side are shortened, and the transplanted fascia, muscle flap aids in preventing a recurrence of the outward dislocation of the patella.

The result obtained in the patient presented was an excellent one. The operation was done ten months ago. Even when the limb is violently flexed to the full extent, the patella remains in its normal relation to the condyles of the femur.

THE LESIONS ASSOCIATED WITH GUN-SHOT WOUNDS OF THE STOMACH.

DR. WALTON MARTIN read a paper with the above title, for which see page 699.

DR. ALEXANDER B. JOHNSON said that in his experience, gun-shot wounds of the stomach uncomplicated by other serious lesions were extremely rare. During a ten years' experience at the Roosevelt Hospital he could only recall one case in which the stomach alone was injured, and that case was peculiar in that the patient had had an adhesive peritonitis, and all that was necessary to do was to open the abdomen and sew up the bullet wound in the stomach. Where the bullet went to in that case, the speaker said he did not know.

In addition to that case, Dr. Johnson said, he could recall only four other cases of gun-shot wound of the stomach upon which he had operated. In two of these, the shot was fired from in front, and the other two from the side or from behind. In one of the latter the lung was injured and in the other the pleura, and in both the diaphragm was perforated. In one of the cases

shot from in front, both walls of the stomach were perforated, as well as the small and large intestines, and the most alarming feature of the case was the profuse hæmorrhage from the division of a considerable branch of the mesenteric artery. This patient recovered. The other three died. In the other case shot from in front, both walls of the stomach were perforated, together with four or five perforations of the small intestine. In addition to that, the patient had shot himself through the head, and died from the effects of the latter wound.

In the two cases shot from the side or posteriorly, the complications were numerous. In one of them the bullet passed through the left lung and diaphragm, both walls of the stomach, the large and small intestines and the kidney. Upon opening the abdomen, the injured lung immediately collapsed, and the patient was in very bad condition. The wounds in the stomach and intestines were closed, but that in the kidney was overlooked and proved fatal.

In another case where the diaphragm was also perforated, collapse of the lung took place. In addition to the injuries in the thorax, the bullet passed through the spleen, through both walls of the stomach, through the large and small intestines and into the liver, where it was found at autopsy. This patient died four or five days after receiving his injury, the immediate cause of death being a generalized infection from the bacillus aërogenes capsulatus.

In all these cases, Dr. Johnson said, the wounds in the stomach were practically a small matter as compared with the complications that were met with. In those cases where the diaphragm was wounded, with resulting collapse of the lung, that in itself was a very serious factor, and the patient's condition at once became very grave not only from the loss of lung power on that side, but also from the probability of infection of the pleura and the production of empyema.

In the treatment of wounds of the diaphragm, the speaker said he had not been able in his cases to reach them with sutures, although he had tried to do so. In the cases he had met with, an osteoplastic operation on the thorax was out of the question, as the condition of the patients was such that a rapid completion of the operation was imperative.

Dr. Joseph A. Blake said that in gun-shot wounds of the

stomach associated with injuries of the diaphragm and thorax, one of the chief points of interest was in connection with the question of whether it was advisable to do a thoracotomy at the time of the primary operation. He recalled one case of gun-shot wound involving the thorax and diaphragm, the stomach, and the left lobe of the liver, where the patient did well as far as the abdominal condition was concerned, but died of pyopneumothorax. This was in accord with the general experience that these patients died as the result of the thoracic complications rather than the abdominal. In one of the cases reported by Dr. Martin, where a thoracotomy was done at the time of the primary operation on the stomach, the former was probably largely instrumental in saving the patient's life. Dr. Blake said that in one case of shot-wound passing through the humerus, two ribs, the diaphragm and the stomach, he first opened the thorax and sewed the diaphragm to the thoracic wall, and then drained the stomach wound through the thoracotomy wound. The patient died within a few hours after the operation.

Dr. John F. Erdman, in reply to Dr. Blake's query as to the advisability of doing a thoracotomy at the time of the primary operation on the stomach, referred to a paper by Dr. John Young Brown of St. Louis, which was read before the American Gynæcological and Obstetrical Society at Cincinnati in September, 1906, in which he reported a series of cases of stab and gun-shot wounds with several recoveries, and in all of these cases he had done a thoracotomy.

Dr. Woolsey referred to a recent case of gun-shot wound of the stomach involving the thorax. The stomach was perforated anteriorly and posteriorly, near the lesser curvature; these openings were closed, and nothing was done to the wound in the thorax. The patient did fairly well for eight days, when the wound accidentally became infected and death occurred two days later.

In another case of gun-shot wound of the stomach with a number of perforations of the intestine, which Dr. Woolsey said he reported some years ago, the perforations were closed, and the patient made a good recovery. In that case none of the abdominal viscera were injured.

Dr. Martin, in closing, said that in most of the cases of recovery after operations for injuries of the diaphragm that had

been reported the injuries were due to stab wounds and not to gun-shot wounds. Suture of the stomach wall through the thoracic wound after stab wound injuries had been done a number of times, but not after gun-shot wounds. In one case reported by Zawadzki, he resorted to a primary thoracotomy, reduced the prolapsed omentum, sewed up the wound in the diaphragm, and then sutured the wound in the stomach through an abdominal incision. The patient survived the operation about eighteen hours. In dealing with perforations of the stomach by small bullets, Dr. Martin said he did not think the wounds were entitled to the significance that was formerly attached to them, the gravity of the injury depending on the associated lesions.